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United States Department of Agriculture
Cooperative State Research, Education, and Extension Service
CSREES Plant Sciences

Plant Sciences UPDATE

The Plant Sciences UPDATE has a NEW LOOK!

November 2004

IN THIS ISSUE

LEAD STORY

USDA Helping American Farmers Manage Pests Without Methyl Bromide

In the early 1990's, a growing body of scientific evidence indicated that methyl bromide contributes to the depletion of the ozone layer of our atmosphere and poses a long-term health risk to humans. Both the regulatory community and most of the scientific world realized that widespread use of methyl bromide had serious consequences and alternatives needed to be discovered or developed to supplant current agricultural uses of this pesticide. For the past 10 years the United States Department of Agriculture (USDA) has been working with the agricultural science community, private industry and commodity organizations to find substitute pesticides and practices to replace the extensive agricultural usages of methyl bromide.

Congress responded by passing legislation that established a competitive research grant program called Methyl Bromide Transitions, which focused nearly 3 million dollars a year to encourage scientific studies to seek alternatives that would enable the United States to comply with the Montreal Protocol. From 2000 to date the USDA has funded a total of 32 research projects, involving hundreds of scientists across the country working together to identify alternative pest management options for methyl bromide usages. This search for alternatives to methyl bromide has resulted in strong new partnership efforts between the USDA, agricultural colleges and universities, commodity groups, the regulatory community and farmers working together toward a common goal.

The Methyl Bromide Transitions program is making a difference by looking at new usage paradigms of currently registered pesticides, discovering new management technologies, determining the economic feasibility of alternatives and demonstrating the efficacy of alternative technologies to farmers in their own fields. Grants for the FY 2004 Methyl Bromide Transitions program have just been made and this year CSREES was able to fund the 8 top-ranked proposals of the 28 applications submitted.

The Federal investment in these 8 projects, will result in appreciable reductions in the use of methyl bromide, thus reducing the risk to the Earth's ozone layer, demonstrate to U.S. farmers innovative and viable alternatives for production systems presently dependent on methyl bromide, protect the economic well-being of American farmers by keeping the U.S. production systems internationally competitive, have a positive impact on our nations balance of trade and on the prices consumers pay in the supermarket, maintain the infrastructure of our nation's research institutions by engaging the professional talents of hundreds of research scientists and extension educators as principle or co-investigators on these projects. In the 8 projects funded in 2004, 28 additional research scientists or extension educators will be working as principle and co-principle investigators at 15 research facilities in 9 different states across the country, and contribute to the development and training of the next generation of agricultural scientist by engaging hundreds of agricultural technicians and graduate students throughout the country in complex research programs aimed at solving real world problems.

For more information: contact Dennis Kopp at dkopp@csrees.usda.gov

Web access: www.csrees.usda.gov/fo/methylbromideicgp.html

FUNDING IMPACTS and OPPORTUNITIES

Partnership Grants Awarded, New IPM Efforts Underway in the Northeast

A fresh infusion of funding is helping IPM experts in the Northeast meet real-world IPM challenges. The Northeastern IPM Center's new IPM Partnership Grants program awarded more than $550,000 to support 21 projects that will focus on regional IPM priorities and extend the Center's information network. Each funded project falls into one of five project types: 1. State Network Projects, 2. IPM Tactics Surveys, Crop Profiles, and Pest Management Strategic Plans, 3. IPM Working Group Priorities, 4. Regional IPM Publications, and 5. Critical and Emerging Issues.

State Network Projects - Six State Network Projects (SNPs) provide information to IPM stakeholders and to key federal and state agencies. They apprise regulators about IPM tactics and serve as liaisons among government agencies, land-grant institutions, and the Center. The SNPs keep stakeholders informed via phone contact, e-mail lists, and websites that include news, IPM recommendations, directories, and updates on regulatory decisions (find links to these sites at http://NortheastIPM.org). New England's Pest Management Network (NEPMNet) functions as one project that includes all New England states, led by James Dill and Glen Koehler (Univ. of Maine). Pennsylvania's Pest Management Information Center is led by Penn State's Kerry Richards. And the four remaining SNPs, based at land-grant institutions in Delaware (led by Susan Whitney-King), Maryland (Amy Brown, Carol Holko, and Sandra Sardanelli), New Jersey (George Hamilton), and

West Virginia (John Banieki), collaborate together as the Mid-Atlantic Information Net-work for Pesticides and Alternative Strategies.

Surveys, Crop Profiles, and Strategic Plans - Several project leaders are spearheading efforts to develop IPM tactics surveys, crop profiles, and pest management strategic plans (PMSPs) for specific crops or IPM settings. These tools are essential in setting regional research, extension, and regulatory priorities. 1. In Delaware, Susan Whitney-King will lead development of a crop profile for soybeans and a PMSP for pickles. 2. In New Jersey, George Hamilton will lead the creation of crop profiles for tomatoes, kale, sweet potatoes, and honey bees, and leads development of a PMSP for carrots. 3. In New England, James Dill and Glen Koehler will oversee development of surveys for school IPM and sweet corn, a crop profile for highbush blueberry, and PMSPs for beans, peas, and carrots. 4. Pennsylvania's Kerry Richards will oversee three new crop profiles and two revised profiles. 5. Ruth Hazzard (Univ. of Massachusetts) will lead the development of a region-wide PMSP for sweet corn. 6. Jody Gangloff-Kaufmann (Cornell Univ.) will develop a nationwide IPM tactics survey for bedbugs, which have become a significant pest in homes, rental units, hotels, and college dormitories.

IPM Working Group Priorities - Two projects will address priorities proposed by the Center's IPM Working Groups. The first, led by James Dill and Glen Koehler, will involve implementation of a regional web-based system to communicate real-time crop and pest forecasts for apples, vegetables, and woody ornamental plants. The second project, led by Cornell's Lynn Braband, will create a model school IPM program. School buildings and grounds personnel in four school districts will be trained to guide IPM adoption in their schools, and the model will be replicated in New York State and later throughout the region.

Regional Publications - Four new IPM publications will be developed to address a range of regional information needs.1. Jeffrey Dorman and James Dill (Univ. of Maine) will revise and reformat the Pocket Pesticide Calibration Guide, which for many years has helped northeastern pesticide applicators make accurate conversion calculations in the field. 2. Carol Holko (Maryland Dept. of Agriculture) will produce a regional pest alert on the brown marmorated stinkbug, a pest of soybeans and woody plants in Asia that has recently been discovered in several Maryland and Pennsylvania counties. 3. Jill Shultz and Paul Curtis (Cornell Univ.) will lead development of a manual promoting IPM solutions for nuisance wildlife control. 4. Art Agnello (Cornell Univ.) will produce a comprehensive field guide on arthropod species and diseases occurring in tree fruit in the eastern United States.

Critical and Emerging Issues - Three projects will address critical or emerging IPM issues, promoting timely responses that can lead to quicker, more effective solutions. 1. Galen Dively (Univ. of Maryland) will lead a project designed to mitigate the growing resistance of Colorado potato beetle populations to imidacloprid, a pesticide that has been used heavily to control the pest in recent years. 2. W. H. Reissig (Cornell Univ.) will lead a project designed to offset a growing pest crisis in the apple industry, where growers have recently suffered severe financial losses due to infestations by internal fruit feeding Lepidoptera. 3. William Coli and John Clark (Univ. of Massachusetts) will lead a project that measures worker and scout exposure to pesticides in "standard" and "reduced risk" IPM systems for apple production in New England.

Web access: http://northeastipm.org/

IPM Innovations for the Northeast: New Research and Extension Projects Funded in 2004

The Northeastern Integrated Pest Management Center's Regional IPM Grants Program has awarded more than $580,000 in support of 10 new projects designed to solve insect, disease, and other pest problems. These projects promote science-based, safe, and effective IPM strategies through a wide range of research and extension approaches, including models for predicting pest activity, new avenues for public outreach, and development of pesticide alternatives.

Predictive Models for Pest Activity - Predictive models help IPM users control pests with optimal efficiency and minimal risk. Gaining access to such forecasting technologies is a high priority for growers, who can use the models to time their pest management activities around critical events. Four of the newly funded projects focus on the use of such models. 1. Alan Biggs (West Virginia Univ.) is building on a computer forecasting model called MARYBLYT to calculate factors such as the costs of disease management, which will help growers better understand the economic risks involved in their fire blight management decisions. 2. Kathryne Everts (Univ. of Maryland) will help northeastern growers to adapt an existing weather-based fungicide application model for management of spinach white rust. 3. Dennis Calvin (The Pennsylvania State University) will work to verify the accuracy of weed and insect predictive models on a wide scale. 4. Cornell University's Juliet Carroll will lead a project to expand the Northeast Weather Association (NEWA), bringing weather information and pest forecast models to apple growers in eastern New York and adjacent regions of Vermont, Massachusetts, Connecticut, and Quebec.

Public Awareness of IPM Practices - Research has shown that citizens are interested in alternatives to chemical pesticides but remain uninformed about IPM and how to practice it at home. 1. Carrie Koplinka-Loehr (Cornell Univ.) responds to this need for information by developing a series of IPM displays for the public: interactive IPM exhibits and an educational kit to be presented at a local science museum, a brochure on pest-resistant trees and shrubs, an introductory IPM brochure, and an informational packet and web page that can be used by IPM programs in the region. 2. In an effort funded by multiple regions, Paul Curtis (Cornell Univ.) leads an effort to revise and expand the website for an information clearinghouse called the Internet Center for Wildlife Damage Management http://wildlifedamage.unl.edu.

Pesticide Alternatives - IPM tactics that reduce our dependence on pesticides can help to minimize health and environmental risks, slow the development of pesticide resistance, and lower the costs of crop production. Four of the funded projects focus on specific pest management strategies that may reduce the need for pesticides. 1. At the University of Maryland, Stanton Gill will lead an effort to control pests using a nonchemical system that involves dipping young nursery plants in hot water. 2. In New Jersey, Michael Stanghellini (Rutgers Univ.) will evaluate the use of organic acids as an effective, sustainable alternative for controlling parasitic mites of honey bees. 3. Roy Van Driesche (Univ. of Massachusetts) will explore nonchemical options for aphid control using a technology called "banker plants." 4. Cornell's Greg English-Loeb will work with colleagues in Pennsylvania and Massachusetts to examine the strawberry sap beetle's use of and growth on alternative food plants.

Web access: http://northeastipm.org/archive/grantprog/ripm/projects/04/index.html

Applications Available for Sustainable Agriculture Grants for Farmers

The Northeast Region Sustainable Agriculture Research and Education program (SARE) has recently released updated application materials for its Farmer/Grower grant program. These grants support Northeast farmers who want to explore innovative sustainable practices on their farms. The Farmer/Grower Grant program, initiated in 1993, allows farmers to conduct experiments, try new approaches, and test emerging ideas about agricultural sustainability. The emphasis is on new ideas that advance good stewardship, improve farm profitability, and strengthen rural communities.

In 2004, grants ranged from $1,121 to determine how an early planting of peas affects the nitrogen needs of pumpkins to $10,000 to see if chemical residues are contributing to health problems in honeybees, The average grant was about $5,800; grants are capped at $10,000. To apply, you must be a full- or part-time farmer in Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, West Virginia, Vermont, or Washington, D.C. Applications can be downloaded from the Northeast SARE web site. The deadline for applications is December 7, 2004.

Web access: www.uvm.edu/~nesare or a printed application can be requested by calling 802-656-0471 or by sending e-mail to nesare@uvm.edu. **Web access to Highlights of Selected Projects from the SARE Program**: www.csrees.usda.gov/nea/ag_systems/sri/sustain_ag_sri_sare.html

(NRI) National Research Initiative Grant Opportunities

Applications are being accepted for fundamental research, mission-linked research, and integrated research, extension, and education projects. Standard awards are not likely to exceed a total budget of $300,000 for 2-4 years of support. Approximately $150 million is available for the FY 2005 award cycle. Deadlines depend on area of grant. Four main areas of this grant address pest management including:

- Integrative Biology of Arthropods & Nematodes - Due November 2, 2004 (closed)
- Arthropod & Nematode Gateways to Genomics - Due February 1, 2005
- Biology of Plant-Microbe Associations - Due December 1, 2004
- Biology of Weedy & Invasive Plants - Due January 7, 2005

For more information: contact the NRI at 202-401-5022, nricgp@csrees.usda.gov
Web access: www.csrees.usda.gov/funding/rfas/pdfs/05_nri.pdf

Integrated Organic Program (IOP)

CSREES, in consultation with the National Agricultural Research, Education and Economics Advisory Board (NAREEAB) combined two separate and distinct legislative authorities to conduct competitive grant programs in organic agriculture into a single grants program, which was titled the Integrated Organic Program (IOP). Working with various stakeholder groups, most notably the Organic Farming Research Foundation, we were able to alert the scientific community to this opportunity despite having a very short period between publication of the first RFA and the deadline for receipt of applications. As a result of this cooperation, 111 applications for funding were received by the deadline, with 104

considered eligible for funding. This is an increase of 75 proposals compared to fiscal year 2003, when the Organic Transitions Program was offered alone. A total of $4,614,837 was available for awards. The 104 applications considered for funding requested a total of $47,614,033. Of the 104 applications, 86 (83 %) were deemed by the peer review panel to merit funding. These 86 applications requested just over $42 million. A total of 11 applications were recommended for funding, which represents 10% of all applications submitted and 13% of those that were considered fundable. The funding recommendations have been analyzed based on program priorities and regions of the country. The results of this analysis are presented in the following tables.

Table 1. Funding Recommendations Based on Program Priority.

Program Priority	Amount Requested	Recommended	# funded / # submitted	%
Crops	$37,488,560	$3,292,730	7 / 73	10
Animals	$5,540,804	$823,321	2 / 12	17
Economics	$5,470,817	$301,018	1 / 14	7
Organic Standards	$947,769	$197,768	1 / 3	33
Other	$2,458,996	$0	0 / 3	0

Table 2. Funding Recommendations for Crops Based on Discipline.

Discipline	Amount Requested	Recommended	# funded / # submitted	%
Agronomy	$26,555,336	$2,417,561	5 / 49	10
Horticulture	$14,568,145	$875,169	2 / 33	6

Table 3. Funding Recommendations Based on Region of the Country.

Region	Amount Requested	Recommended	# funded / # submitted	%
North Central	$15,548,862	$463,645	1 / 33	3
Northeastern	$11,769,543	$2,274,802	5 / 27	18
Southern	$8,731,772	$305,015	1 / 25	4
Western	$15,829,769	$1,359,607	4 / 25	16

The states from which successful applications were submitted are as follows: Arkansas, California (3), Massachusetts, Minnesota, New York (3), Vermont and Washington. Based on recommendations from NAREEAB, we have improved the RFA for fiscal year 2005 IOP by providing a web site URL that leads to a document detailing research and extension needs for organic animal production. We have consulted with members of the National Organic Standards Board and with others in the organic industry on ways to improve the RFA and the program in general. We are planning to publish the RFA for 2005 on or near December 1 with an application due date of May 2. For 2006, we are planning to publish the RFA in early October, which will allow the peer review panel to meet in February. Although not ideal from a weather standpoint, this will make it easier for us to recruit farmers and other representatives from the organic industry to serve as panel members.

CSREES PROGRAM HIGHLIGHTS

Department of Defense Receives Pesticide Environmental Stewardship Award

EPA's Pesticide Environmental Stewardship Program (PESP) selected the Department of Defense (DoD) as a PESP Champion for 2004. EPA selected the Champions based on their outstanding efforts promoting integrated pest management (IPM) and advancing pollution prevention to reduce the health and environmental risks associated with pesticide use. Among other IPM initiatives, DoD reduced its pesticide use beyond its 50% target to a total 56% reduction using 2003 baseline data. CSREES collaborates with DoD and provides technical assistance on IPM through an interagency agreement with the U.S. Army Environmental Center. Dr. Herb Bolton supports these efforts as the National Program Leader for Army Environmental Programs. The U.S. Army Environmental Center was specifically recognized as a stand-out contributor in DoD's 2004 PESP award for its demonstration project on the integrated, reduced-risk strategy for red imported fire ants. Partners in the project included Clemson University; USDA, ARS, Center for Medical, Agricultural, and Veterinary Entomology; the U.S. Army; and the U.S. Air National Guard.

Web access: www.epa.gov/oppbppd1/PESP/

Soybean Aphid Tools

The prevailing question on everyones' mind is "How bad will soybean aphid infestations become?" The University of Minnesota has developed a web site to provide the latest information on soybean aphid, its status in 2004, and its ecology and management (www.soybeans.umn.edu). Two helpful tools have also been developed and can be found at the website: the "speed scouting" system and the soybean aphid growth estimator.

'"Speed Scouting" System - A new "speed scouting" system is now available to determine when to treat soybean aphid infestations. The new speed scouting system was developed by entomologists at the University of Minnesota and funded by the North Central Soybean Research Program and the Minnesota experiment station in partnership with CSREES. The new plan can reduce the time spent scouting fields, since every insect does not need to be counted. The sampling cut-off point for the new scouting system is 40 aphids per plant. If a plant has less than 40 aphids, it's not considered "infested." If the plant has 40 or more aphids-and you don't need to continue counting--it's considered infested.

The 40-aphid figure is only a sampling criteria and not an economic threshold number, which has been determined from Minnesota research as 250 aphids per plant through pod set. Late-maturing, or late-planted, soybean might benefit from controlling heavy infestations after soybeans begin setting seed, but no thresholds are available for these later stages. The advantage of the new sampling plan is that treatment decisions can be made quickly--especially at very high or very low aphid densities. Three decisions are possible on each field visit with the new system: treat the field but return in 7-10 days for further scouting, treat the field, or re-sample the field in three to four days. Details on using the new plan, including worksheets, are available at www.soybeans.umn.edu/crop/insects/aphid/aphid_sampling.htm.

Soybean Aphid Growth Estimator: The SAGE Model - Another great tool which has emerged from the University of Minnesota and funded by the North Central Soybean Research Program is the SAGE model. This is an interactive web based tool that allows you to estimate the population growth of soybean aphids. Information collected such as the average aphid density and the day's high and low temperatures are entered into the model which will then predict the average rate of population build up and when the population is expected to reach a threshold of 250 aphids per plant. This model can also be used as a guide to determine when to resample a field. When using the SAGE model your data can also be saved using the "Save As..." function in Excel. The SAGE model can be found at www.soybeans.umn.edu/crop/insects/aphid/aphid_sagemodel.htm.

Soybean Rust Teleconference Training

The North Central Integrated Pest Management Center organized a regional teleconference training session to address soybean rust issues. Eleven states in the North Central region participated in this training teleconference entitled "Soybean Rust: Issues and Facts." Almost 100 sites participated in the regional program and attendees represent over 9.17 acres of soybean production. Members of the Planning Committee included Dr. Greg Tylka and Mr. Virgil Schmitt, Iowa State University; Drs. Lisa Behnken, Jim Kurle and Seth Naeve, University of Minnesota; Dr. Roger Borges, University of Wisconsin; Dr. Dean Malvick and Mr. Dave Feltes, University of Illinois; and Dr. Susan Ratcliffe, North Central IPM Center. The region's Extension IPM Coordinators were contacted to determine who should serve as the point of contact for each state as development of the program was shared across the region. The program was conducted on June 29, 2004. Presentations were provided by Drs. Matthew Royer, Animal and Plant Health Inspection Service (APHIS); Glen Hartman and Monte Miles, Agricultural Research Service (ARS); X.B. Yang, Chair of the North Central Technical Committee for Soybean Rust (NC-504); Kent Smith, Office of Pest Management Policy (OPMP); and David Bell, USDA Risk Management Agency (RMA). Each state had the opportunity to conduct a state specific teleconference to discuss their response plan following the regional teleconference. The PowerPoint presentations are available on the web at www.ncipm.org/soybeanrust/conference.html. The regional session was recorded and will be available for download with the PowerPoint presentations in the near future.

For more information: contact Susan Ratcliffe, North Central IPM Facilitator, North Central IPM Center, University of Illinois Department or Crop Sciences, 217-333-9656, sratclif@uiuc.edu

Public Research and Regulatory Review of Small-market Biotechnology-derived Crops

Expert workshop on navigating and funding the regulatory process for small-market transgenic crops from public-sector and small business research. CSREES has partnered with: Langston University, OK; The National Center for Food and Agricultural Policy (NCFAP); and the Agricultural Research Service (ARS, USDA), to organize and expert workshop on navigating and funding the regulatory process for transgenic crops developed by research in the public sector and small businesses.

The workshop will have special reference to small-market crops that face a significant disparity between the cost of meeting regulatory requirements for a transgenic variety, and the potential profit from a small market. The purpose of the workshop is to address existing regulatory requirements effectively and at minimal cost to allow a broader range of transgenic crops and traits to become available. The workshop will not suggest changes in the regulatory process. The workshop venue will be the APHIS conference facility in Riverdale, MD. Availability of the APHIS facility to the workshop reflects the commitment by the regulatory agencies to an effective, science-based regulatory process.

Objectives of the workshop are to identify current regulatory requirements that are major sources of cost or of cost-creating uncertainties; identify researchable issues that would help meet those requirements effectively and at minimal cost; consider existing models that have enabled other small-market products, also subject to regulation, to complete the requirements necessary to come to market.; propose one of these models, or a new model, for small-market transgenic crops. The target outcome, ultimately, is a wider range of public-goods benefits than can be provided by large-market transgenic crops and private investment alone.

For more information: contact Ann Marie Thro, Chair, USDA Steering Committee, 202-401-6702, athro@csrees.usda.gov; William Goldner, Chair, Publications Subcommittee, 202-401-1719, wgoldner@csrees.usda.gov

First Detector Educator In-Service Training

The USDA-CSREES, National Plant Diagnostic Network (NPDN) Education Committee, chaired by Dr. Gail Wisler and the Southern Plant Diagnostic Network (SPDN) is offering first detector training. This training is intended for county agents, pest coordinators/managers, and Master Gardeners in agriculture, horticulture, and natural resources. Lecture and hands-on sessions cover: the NPDN mission, monitoring for high risk pests, proper sample submission, common signs of insect and pathogen damage, exotic insects and pathogens of concern, digitally assisted diagnosis, and NPDN exercise scenarios.

The NPDN is divided into five regions each of which are coordinated by a Land-Grant Institution: the University of Florida – Southern (SPDN , Cornell University - Northeastern (NEPDN), Kansas State University – Great Plains (GPDN), Michigan State University - North Central (NCPDN) and the University of California, Davis- Western (WPDN). The University of Florida coordinates the SPDN, and the NPDN Education Sub-Committee, comprised of extension educators from across the US. The NPDN Education Sub-Committee has developed educational modules that are designed to assist "first detectors" in the early detection of exotic pests, particularly pathogens and insects. First detectors are those individuals who are most likely to first encounter exotic pests in the field. County extension agents, crop consultants, growers, Master Gardeners, and others involved in crop production or pest management are potential first detectors.

The objectives of this training are to i) create an awareness of agricultural bioterrorism and the mission of the NPDN; ii) improve exotic pest recognition and early detection capabilities; iii) improve identification skills of exotic and existing pests of concern; and iv) provide proper protocols for sample submission of suspected exotic pests. First detectors will become a part of a nationwide registry of first detectors who will be notified in the event of an exotic agricultural pest emergency. Many university diagnostic clinics will waive sample fees for county extension faculty who are sending a suspected "high risk" pest sample for diagnosis upon completion of this program. Although region-based training has been occurring for two years, the first national training occurred at the National Association of Agricultural County Agents in July.

For more information: contact Carrie Harmon 352-392-3631 ext 254, clharmon@ufl.edu or Amanda Hodges 352-392-1901 ext 122, achodges@ifas.ufl.edu. **Web access and training materials:** http://spdn.ifas.ufl.edu/First_Detectors.htm.

National Site for the USDA Regional IPM Centers Information System

The Regional Integrated Pest Management Centers are sponsored by CSREES. The national web site www.ipmcenters.org/ provides information about commodities, pests and pest management practices, people and issues in the United States. It also provides links to sites for each of the four Regional IPM Centers. At this national site you can access the Crop Profiles and Pest Management Strategic Plans databases, an IPM Expertise database, information on pesticide use, current pest management research, funding opportunities, and links to many related sites. At each of the Regional Center Sites, you can access the same information as found on this National Site, but specific to the individual region. Additional region-specific information, news and announcements can be found within each Regional Center's Site.

CABI Compendium Is Available to Land Grant University Faculty/Staff

An agreement between CSREES and CABI publishing provides access to CABI publishing's compendia series. Land grant faculty and staff are able to access the three compendia in the series through 2000 access points. The three compendia cover animal health, crop protection, and forestry. The compendia are interactive encyclopedic knowledge

bases of peer-reviewed information that has been developed by an international consortium including five agencies of the USDA which are CSREES, Animal and Plant Health Inspection Service (APHIS), Agricultural Research Service (ARS), Foreign Agricultural Service (FAS), and the Forest Service (FS). The Regional Integrated Pest Management Centers are leading the distribution efforts in cooperation with the National Animal Health Laboratory Network and the National Plant Diagnostic Network.

For more information: contact Amy Rhodes at arhodes@csrees.usda.gov, **Web access:** www.ipmcenters.org/cabi

New and Improved CSREES Pest Managers E-Mail Distribution List

This list shares information about CSREES' pest management programs, including requests for applications and newsletters. The list has been expanded to include a broader cross-section of those involved with IPM research and extension programs. The pest manager's list now includes those involved with the Pesticide Safety and Education Program (PSEP), IPM Centers, Extension IPM Implementation Program, and the Minor Crop Pest Management Program (IR-4). In addition, applicants and others associated with CSREES' plant and animal systems competitive grants programs and other interested parties have been added.

For more information: contact Kathy Kimble-Day at kday@csrees.usda.gov .

Northeastern IPM Center Presents a Conference on Urban and Community IPM

The Northeast Regional Community and Urban IPM Conference will be held March 15-16, 2005, in Manchester, NH. Researchers, educators, regulators, and pest managers from across the region will share their insights and expertise, emphasizing low-risk, environmentally sound methods for controlling insects, diseases, weeds, and wildlife pests in communities and urban settings. Conference session will include the following topics IPM for urban forests and landscapes; IPM in homes, schools, and other buildings; IPM in turf settings such as parks, athletic fields, and golf courses; IPM education and outreach; Invasive species in the urban environment; Public health issues such as West Nile virus; Wildlife control methods; Agriculture in the urban environment.

For more information: contact Liz Thomas at 315-787-2626, egt3@cornell.edu

Web access: www.nepmc.org/conference2005_index.cfm

UPCOMING AND RECENT MEETINGS

2004

November

- Biodynamic Farming and Gardening Association, Agriculture Conference, Durham, NC, November 12-14, 2004. www.biodynamics.com/pdf/conference%20web.pdf
- Entomological Society of America Annual Meeting, Salt Lake City, UT, November 14-17, 2004. www.entsoc.org/annual_meeting/2004/ameeting.htm
- Genetics & Molecular Biology of Industrial Microorganisms/Biotechnology of Microbial Products, San Diego, CA, November 14-18, 2004. www.simhq.org/html/meetings.html

December

- 'Homoptera'Workshop Specialized Taxonomic Training for Entomologists. Gainesville, FL, December 9-11, 2004. www.conference.ifas.ufl.edu/homoptera/

2005

January

- ASHS Northeast Region Annual Meeting, Washington, DC, January 4-6, 2005. www.ashs.org/conferences.html
- Plant and Animal Genome XIII Conference, San Diego, CA, January 15-19, 2005. www.intl-pag.org/11/11-intro.html
- Guelph Organic Conference & Organic Expo Canada, Ontario, Canada, January 20-23, 2005. www.guelphorganicconf.ca/

February

- ASHS Southern Region Annual Meeting, Little Rock, AR, February 4-8, 2005. www.ashs.org/conferences.html
- IR-4 Strategic Planning Conference, Crystal City, VA, February 15-17, 2005. www.ir4.rutgers.edu

March

- The Northeast Regional Community and Urban IPM Conference, Manchester, NH. March 15-16, 2005. www.nepmc.org/conference2005_index.cfm
- Plant Breeding and the Public Sector: Who will train plant breeders? Symposium, Michigan State University, East Lansing, MI, March 9-11, 2005. www.hrt.msu.edu/pbsymp/

July

- ASHS Annual Conference, Las Vegas, NV, July 18-21, 2005. www.ashs.org/conferences.html
- OFA - an Association of Floriculture Professionals 2005 Short Course & Trade Show, Columbus, OH, July 9-13, 2005. www.ofa.org/

September

- IFOAM World Conference, Adelaide, Australia, September 19-21, 2005. www.nasaa.com.au/ifoam/

2006

April

- Fifth National IPM Symposium "Delivering on a Promise", St. Louis, MO, April 4-6, 2006 www.ipmcenters.org/IPMSymposiumV/

July

- OFA - an Association of Floriculture Professionals 2005 Short Course & Trade Show, Columbus, OH, July 8-12, 2006. www.ofa.org/

INSIDE THE BELTWAY

CSREES Launches New Web Site - Improved Communication Tool

CSREES has brought a new dimension to the public by kicking off the Agency's 10th anniversary by launching a new Web site to better serve our partners and the public. The new Web site can be found at www.csrees.usda.gov and culminates a lengthy process that engaged most of CSREES. The Agency's vast information resources have been reviewed, synthesized, analyzed, and recast into a more usable site designed following a communications strategic planning process that involved individuals from USDA, CSREES, and our partners. The Web site organizes the Agency's 59 programs into 11 national emphasis areas. Each program description features an overview, an In focus section highlighting select program successes, funding opportunities, partnership efforts, events, results and impacts, resources, and Agency contacts.

An extensive Doing Business with CSREES section features policies and procedures, frequently asked questions, discussion of award reviews and post-award management, planning and reporting impact, and training opportunities. The Funding Opportunities part of the Web site organizes all funding programs and details the grants process, providing access to e-Grants and all application forms. An exciting addition to the new site is a Newsroom featuring news from our partner institutions related to CSREES programs. Impact statements, news releases and media advisories, speeches and Congressional testimony, and a listing of relevant partnership events are featured.

Under the leadership of the CSREES Communications Staff and with the cooperation and participation of CSREES program leaders and support staff, the Agency engaged in a thorough review of all information on the current CSREES site, developed standards for information on the new site, and created new information or migrated current information to the new site. CSREES has a new "face" for its 10th anniversary. As the major communications tool for the Agency, we are proud to launch this Web site and bring the best work of CSREES to our partners and the public.

Senate Takes Action on President's FY 2005 Budget Proposal

On Tuesday, September 14, the Senate Appropriations Committee marked up the FY 2004 agricultural appropriations bill. The Senate mark for CSREES is $1,149,238,000. This is an increase of $129,216,000 over the FY 2005 President's Budget and $25,326,000 over the FY 2004 appropriation with rescission. It is a decrease of $6,416,000 from the FY 05 House mark. (The totals for the FY 2005 President's budget, the FY 2004 appropriation, the FY 05 House and Senate marks include an estimate of interest earned on the Native American Endowment Fund). The complete CSREES budget is listed on pages 11-12.

AGENCY PERSONNEL SPOTLIGHT

Entomological Foundation Honors Eldon Ortman

Entomological Foundation's 12th Annual Gala, to be held November 17th, at the Salt Lake City Marriott. The annual dinner is one of the Entomological Foundation's largest fundraising events, which benefits the programs of the Foundation and pays tribute to individuals who have demonstrated outstanding support and commitment to entomology. This year, Dr. Eldon Ortman will be our honoree. During his distinguished career at Purdue University, Dr. Ortman's responsibilities included serving as Department Chair of Entomology, Associate Director and Acting Director of Agriculture Research Programs, and Professor of Entomology with the Department of Agriculture Research Programs. His career also includes his work with CSREES on pest management programs to enhance communication and interaction with the Land-Grant System and other agencies and stakeholders. Dr. Ortman is recognized as a leader in integrated pest management and has participated in many professional activities including many years of service to ESA and the Foundation. His involvement in ESA includes serving on various ESA committees such as ESA's Governing Board and his position as President of ESA. He is also a founding member of the Foundation.

For more information on this event: www.entfdn.org/benefit%20dinner.htm

RESOURCES

On-Line Insect Resistance Management Learning Center

The National Corn Growers Association in cooperation with several biotechnology companies developed an on-line Insect Resistance Management Learning Center (IRMLC). The IRMLC allows corn growers to access training on several topics, including IRM, Compliance Assurance Program (CAP), Integrated Pest Management (IPM), Corn Borer, and Corn Rootworm. Within each section, users of the IRMLC must complete a series of questions to demonstrate their knowledge. Upon satisfactory completion, the user can print out a certificate of completion.

Tom Slunecka, National Corn Growers Association, and Susan Ratcliffe, North Central IPM Center, Richard Hellmich, Iowa State University, and Mark Boetel, North Dakota State University coordinated review of the training module by members of the North Central Technical Committees, NC-046 (Development, Optimization and Delivery of Management Strategies for Corn Rootworms) and NC-205 (Ecology and Management of European Corn Borer and Other Stalk- Boring Lepidoptera). The Insect Resistance Management Training modules are accessible at www.ncga.com/biotechnology/IRMCenter/.

Tick Management Handbook

The handbook is an integrated guide for homeowners, pest control operators, and public health officials for the prevention of tick-associated disease written by Kirby C. Stafford III, Ph.D. An electronic version in PDF format is available at the Experiment Station's web site, www.caes.state.ct.us under Publications. Requests for a printed copy can be made by contacting Dr. Kirby Stafford at: Connecticut Agricultural Experiment Station, P.O. Box 1106, New Haven, CT 06504. Phone: 203-974-8485 (1-877-855-2237 toll free), Kirby.Stafford@po.state.ct.us

IPM of Midwest Landscapes Available

Drs. Vera Krischik, University of Minnesota and John Davidson, University of Maryland served as coeditors for the recently released publication *IPM of Midwest Landscapes* developed by the North Central Committee on Landscape IPM (NCR-193). The project was funded in part by a grant from CSREES. Dr. Susan Ratcliffe, North Central IPM Center, coordinated marketing and sales of the full color, 316-page publication. To order visit www.ncipmc.org/bookorder.html.

Cooperative State Research, Education, and Extension Service ($000)				
Programs	FY 2004 Appropriations Act	FY 2005 President's Budget	FY 2005 House Action	FY 2005 Senate Committee
Research and Education Activities				
Formula Programs:				
Hatch Act	$179,085	$180,148	$180,648	$180,148
McIntire-Stennis Cooperative Forestry	21,755	21,884	22,384	23,000
Evans-Allen Program	35,788	36,000	37,000	36,000
Animal Health and Disease, Section 1433	4,539	5,098	5,098	5,098
Subtotal	**241,160**	**243,130**	**245,130**	**244,246**
Special Research Grants:				
Expert IPM Decision Support System	158	177	177	158
Global Change, UV-B Monitoring	2,000	2,500	2,000	2,000
Integrated Pest Management & Biological Control	2,439	2,725	2,725	2,439
Minor Crop Pest Management, IR-4	9,549	10,485	11,235	10,550
Minor Use Animal Drugs	526	588	588	526
National Biological Impact Assessment Program	225	253	253	225
Pest Management Alternatives	1,448	1,619	1,619	1,448
Other	107,904	0	85,353	105,980
Subtotal	**124,249**	**18,347**	**103,950**	**123,326**
National Research Initiative Competitive Grants	**164,027**	**180,000**	**180,000**	**183,000**
Other Research:				
Critical Agricultural Materials	1,111	0	1,111	1,111
Aquaculture Centers	4,000	3,996	4,000	4,000
Sustainable Agriculture Research and Education Program	12,222	9,230	12,722	12,222
Supplemental and Alternative Crops	1,063	0	1,196	840
1994 Research Grants	1,087	998	1,087	1,087
Joe Skeen Institute for Rangeland Restoration	895	0	1,000	1,000
Federal Administration (Direct Appropriation)	37,482	7,538	42,610	26,785
Subtotal	**57,860**	**21,762**	**63,726**	**47,045**
Higher Education:				
Graduate Fellowships Grants	2,883	4,500	4,500	2,883
Institution Challenge Grants	4,859	5,500	5,500	4,859
1890 Institution Capacity Building Grants	11,411	11,411	12,411	11,411
Multicultural Scholars	986	998	998	998
Hispanic Serving Institutions Education Grants Program	4,645	4,645	5,645	4,645
Tribal Colleges Education Equity Grants Program	1,679	2,250	2,250	1,689
Tribal Colleges Endowment Fund	8,947	12,000	12,000	12,000
Interest (Estimated) Earned on the Tribal Colleges Endowment Fund	1,930	2,508	2,508	2,508
Secondary/2-Year Post Secondary	890	1,000	1,000	890
Agrosecurity Education	0	5,000	0	0
Alaska Native-Serving and Native Hawaiian-Serving Institutions	3,131	2,997	2,997	3,500
Resident Instruction Grants for Insular Areas	0	0	500	0
Subtotal	**41,361**	**52,809**	**50,309**	**45,383**
Total, Research and Education Activities	628,657	516,048	643,115	643,000
Outreach and Assistance for Disadvantaged Farmers Activities				
Section 2501:				
Outreach and Technical Assistance for Socially Disadvantaged Farmers and Ranchers Program	5,935	5,935	5,935	5,935

Cooperative State Research, Education, and Extension Service ($000)				
Programs	FY 2004 Appro. Act	FY 2005 President's Budget	FY 2005 House Action	FY 2005 Senate Committee
Integrated Activities				
Section 406 Legislative Authority:				
Water Quality	$11,530	$12,971	$12,971	$11,530
Food Safety	13,305	14,967	14,967	13,305
Regional Pest Management Centers	4,028	4,531	4,531	4,028
Crops at Risk from FQPA Implementation	1,330	1,497	1,497	1,330
FQPA Risk Mitigation Program for Major Food Crop Systems	4,345	4,889	4,889	4,345
Methyl Bromide Transition Program	3,131	2,498	2,498	3,131
Organic Transition Program	1,889	499	1,889	1,889
Subtotal	**39,558**	**41,852**	**43,242**	**39,558**
Other Legislative Authorities:				
International Science and Education Grants Program	895	1,000	1,000	895
Critical Issues	444	2,500	2,500	444
Regional Rural Development Centers	1,345	1,513	1,513	1,345
Food and Agriculture Defense Initiative (Homeland Security)	7,953	30,000	18,000	15,000
Subtotal	**10,637**	**35,013**	**23,013**	**17,684**
Total, Integrated Activities	50,195	76,865	66,255	57,242
Extension Activities				
Formula Programs:				
Smith-Lever Formula 3(b) &(c)	$277,742	$275,940	$277,242	$277,742
1890 Institutions	31,720	32,117	33,133	32,117
Subtotal	**309,462**	**308,057**	**310,375**	**309,859**
Smith-Lever 3(d) Programs:				
Expanded Food and Nutrition Education Program	52,057	57,909	58,909	58,000
Pest Management	9,563	10,759	10,759	9,563
Farm Safety	4,911	0	4,600	4,174
Children, Youth, and Families at Risk	7,538	8,481	8,481	7,538
Youth Farm Safety Education and Certification	444	499	499	444
Sustainable Agriculture	4,333	3,792	4,000	4,333
Extension Indian Reservations Program	1,774	1,996	1,996	1,774
Subtotal	**80,620**	**83,436**	**89,244**	**85,826**
Other Extension Programs:				
Extension Services at the 1994 Institutions	2,929	3,273	3,273	2,929
Renewable Resources Extension Act	4,040	4,093	4,093	4,093
Rural Health and Safety	2,331	0	0	1,981
1890 Facilities (Sec.1447)	14,912	14,912	16,912	14,912
Grants for Youth Serving Institutions	2,667	0	0	2,667
Federal Administration:				
Other	21,542	6,653	15,702	19,944
Ag in the Classroom	622	750	750	850
Subtotal	**49,043**	**29,681**	**40,730**	**47,376**
Total, Extension Activities	439,125	421,174	440,349	443,061
Total, Cooperative State Research, Education, and Extension Service	1,123,912	1,020,022	1,155,654	1,149,238

PLANT SCIENCES STAFF DIRECTORY

For more information about our programs, consult our Web site or the appropriate individual listed below:

Name	Discipline / Program / Issues	Phone (202)	Email *
Bewick, Tom	Horticulture; organic agriculture, invasive species, urban agriculture	401-3356	tbewick
Bolton, Herb	Entomology; invasive species	401-4201	hbolton
Cardwell, Kitty	Plant pathology, National Plant Diagnostic Network	401-1790	kcardwell
Fitzner, Mike	Extension IPM; Regional IPM Centers; Plant breeding	401-4939	mfitzner
Goldner, William	Small Business; Plant Production and Protection; Forests and Related Resources	401-1719	wgoldner
Green, James	Horticulture/nursery and greenhouse crop physiology & production, landscape & turf maintenance, home horticulture	401-6134	jgreen
Hoffman, Bill	Program Specialist	401-1112	whoffman
Jerkins, Diana	Managed ecosystems	401-6996	djerkins
Jones, Dan	Biochemistry & molecular biology; biotechnology	401-6854	ddjones
Jones, Preston	Agronomy; precision agriculture	401-1990	jpjones
Johnson, Monte	Entomology; toxicology; PSEP; PMAP	401-1108	mpjohnson
Kaleikau, Ed	Plant Genomics	401-1931	ekaleikau
Kimble-Day, Kathy	Program Specialist	401-4420	kday
Kopp, Dennis	Entomology, Methyl Bromide Alternatives; IR-4	401-6437	dkopp
Lichens-Park, Ann	Biol. of plant microbe assn., microbial gene sequencing	401-6466	apark
Lin, Liang-Shiou	Plant genetic mechanisms, plant growth & development	401-5042	Llin
McLean, Gail	Plant responses to the environment, plant biochemistry, bioinformatics	401-6060	gmclean
Meyer, Rick	Entomology; CAR; critical issues	401-4891	hmeyer
Nowierski, Bob	Bio-based IPM; applied ecology; RAMP, invasive species	401-4900	rnowierski
Ortman, Eldon	Shared Faculty; IPM	401-5804	eortman
Poth, Mark	Director, National Research Initiative	401-5244	mpoth
Parochetti, Jim	Weed science	401-4354	jparochetti
Purcell-Miramontes, Mary	Entomology, nematology, bio-based IPM	401-5114	mpurcell
Rhodes, Amy	Program Specialist	401-6195	arhodes
Sheely, Deb	Director, Competitive Integrated Programs	401-1624	dsheely
Thro, Ann Marie	Plant breeding; plant genetics; genomics	401-6702	athro

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CSREES Plant Science Websites
Plant & Animal Systems Unit: www.csrees.usda.gov/about/offices/pas.html
Pest Management Program Index: www.csrees.usda.gov/nea/pest/pest.html